

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 09-171278

(43)Date of publication of application : 30.06.1997

(51)Int.Cl.

G03G 15/00

B29C 63/02

G03G 15/20

G03G 21/00

(21)Application number : 07-330684

(71)Applicant : RICOH CO LTD

(22)Date of filing : 19.12.1995

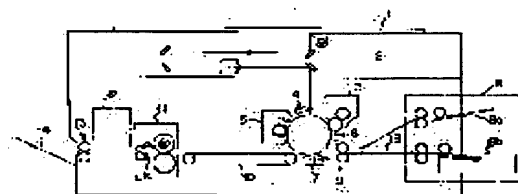
(72)Inventor : YABEI TOSHIYA
WATANABE HIDEYO
OKAMOTO JUN
KODAIRA YASUHIRO

(54) ELECTROPHOTOGRAPHIC COPYING MACHINE WITH LAMINATING FUNCTION

(57)Abstract:

PROBLEM TO BE SOLVED: To provide the title copying machine which is provided with a normal copying function and a laminating function and ejects a laminated member to be recorded after folding it or opening holes therein.

SOLUTION: As for an electrophotographic copying machine where a toner image formed on an image carrier 6 is transferred on transfer paper, and transferred paper is carried to a fixing device 11 and an unfixed toner image is fixed on the transfer paper by thermocompression fixing, and it is ejected to the outside of a machine, the copying machine is provided with the laminating function where the recorded member 18 held between transparent synthetic resin film is fed and is carried to the fixing device 11 and is laminated with the transparent synthetic resin film by the thermocompression fixing. The normal copying function and the laminating function are arbitrarily selected, and a switch for folding is provided at a control part, and it possesses a means 12 for folding (or opening the holes at) the recorded member 18 when the member 18 passes the fixing device 11 linked with the switch.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the
examiner's decision of rejection or application
converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of
rejection]

[Date of requesting appeal against examiner's decision
of rejection]

[Date of extinction of right]

*** NOTICES ***

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] In the electrophotography copying machine which the toner image formed on image support is imprinted to a transfer paper, the transfer paper after an imprint is conveyed to an anchorage device, and a non-established toner image is fixed on a transfer paper by heat pressurization fixing, and is made to discharge to outside the plane It has the lamination function which feeds paper to the recorded member pinched with the lucite film, conveys to said anchorage device, and laminates a recorded member with a lucite film by heat pressurization fixing. It is selectable to arbitration in a usual copy function and a usual lamination function, and form the switch for fold attachment in a control unit, and the switch is interlocked with. The electrophotography copying machine with a lamination function characterized by providing a means by which said recorded member creases a recorded member after passing an anchorage device.

[Claim 2] In the electrophotography copying machine which the toner image formed on image support is imprinted to a transfer paper, the transfer paper after an imprint is conveyed to an anchorage device, and a non-established toner image is fixed on a transfer paper by heat pressurization fixing, and is made to discharge to outside the plane It has the lamination function which feeds paper to the recorded member pinched with the lucite film, conveys to said anchorage device, and laminates a recorded member with a lucite film by heat pressurization fixing. The electrophotography copying machine with a lamination function characterized by it being selectable to arbitration in a usual copy function and a usual lamination function, and having formed the switch for perforation in the control unit, and the switch having been interlocked with, and providing a means by which said recorded member perforates a recorded member after passing an anchorage device.

[Claim 3] In the electrophotography copying machine which the toner image formed on image support is imprinted to a transfer paper, the transfer paper after an imprint is conveyed to an anchorage device, and a non-established toner image is fixed on a transfer paper by heat pressurization fixing, and is made to discharge to outside the plane It has the lamination function which feeds paper to the recorded member pinched with the lucite film, conveys to said anchorage device, and laminates a recorded member with a lucite film by heat pressurization fixing. Selectable [to arbitration] in a usual copy function and a usual lamination function The electrophotography copying machine with a lamination function characterized by providing a means by which form a margin section cut switch in a control unit, and the switch is interlocked with, and said recorded member cuts the margin section after passing an anchorage device.

[Claim 4] The electrophotography copying machine with a lamination function according to claim 3 characterized by providing a means by which form a margin assignment switch and the switch with which the switch is interlocked with and the margin of the amount of arbitration is attached, and the switch is interlocked with, and a recorded member attaches and cuts the margin section of the amount of assignment into a control unit after passing an anchorage device.

[Claim 5] The electrophotography copying machine with a lamination function according to claim 3 characterized by having formed the size assignment switch and the switch which is interlocked with the switch and assignment size can choose as arbitration in the control unit, and for the switch having been interlocked with, and providing the means which a recorded member cuts into assignment size after passing an anchorage device.

[Translation done.]

*** NOTICES ***

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]**[0001]**

[Field of the Invention] Especially this invention relates to the electrophotography copying machine with a lamination function which can laminate the recorded member of the shape of a sheet, such as an identification card, a card, a duplication, a photograph, a poster, and a map, with a lucite film about an electrophotography copying machine.

[0002]

[Description of the Prior Art] Laminating with a lucite film is performed and this lamination was conventionally performed by the lamination special-purpose machine in order to protect the recorded member of the shape of a sheet, such as an identification card, a card, a duplication, a photograph, a poster, and a map, from dirt, a blemish, Siwa, a crimp, etc. However, the class of recorded member which should be laminated is limited to some extent by the purpose of use, magnitude, etc., and there is not so much operating frequency. moreover, a lamination special-purpose machine cannot be used other than a lamination, but since it is moreover comparatively expensive, a general diffusion rate is the thing present condition which is not so high.

[0003] Then, the lamination approach which enabled it to laminate the printed matter used individually easily and simply, and the electrophotography copying machine with a lamination function are proposed by laminating a lucite film in recorded members, such as sheet-like printed matter, using an electrophotography copying machine (refer to JP,63-4936,A and JP,63-6585,A).

[0004] Generally an electrophotography copying machine forms an electrostatic latent image by exposure and the optical writing of a manuscript image on the image support which consists of a photo conductor of the shape of the shape of a drum, or a belt. Although develop and form this electrostatic latent image into a visible image with the toner of a developer, imprint the toner image formed on that image support to a transfer paper, the transfer paper after an imprint is conveyed to an anchorage device, a non-established toner image is fixed on a transfer paper by heat pressurization fixing and a duplication is formed The lamination approach by the electrophotography copying machine laminates recorded members, such as sheet-like printed matter, with a lucite film using the above-mentioned anchorage device.

[0005] The heat anchorage device of an electrophotography copying machine pressurizes and fuses [heating] the toner image generally imprinted by the transfer paper using the heated roller, and is established on a transfer paper. This anchorage device is usually set as the temperature of 180-200 degrees C. Usually, although it is necessary to convey at the rate which heats to the temperature which fuses the adhesives of the glue line formed in this lucite film, and printed matter etc. and a lucite film moreover paste up certainly to laminate recorded members, such as sheet-like printed matter, with the lucite film with which the glue line was formed, the heat anchorage device of an electrophotography copying machine may be used suitable also for this lamination process.

[0006] As an example of the lamination approach by the conventional electrophotography copying machine here It is supposed that forward inverse rotation is possible also for the delivery roller which discharges the transfer paper after fixing outside the plane from delivery opening while making possible forward inverse rotation of the heating roller of the pair of an anchorage device. The layered product which carried out the laminating of the lucite film with which the glue line was formed in one side, the sheet-like printed matter, etc. through this glue line is inserted from said delivery opening, and a layered product is conveyed to an anchorage device by the inversion of said delivery roller. By the inversion of said heating roller Between heating rollers is passed, a layered product is lamination-ized, by normal rotation of the afterbaking roller and a delivery roller, a layered

product is discharged from an exhaust port and sheet-like printed matter etc. is laminated with the lucite film. Moreover, the layered product which carried out the laminating of the lucite film with which the glue line was formed in one side, the sheet-like printed matter, etc. through this glue line as another method is conveyed to an anchorage device in the same conveyance path as the conveyance path of the usual transfer paper, after passing between heating rollers and lamination-izing a layered product, it discharges from an exhaust port and sheet-like printed matter etc. is laminated with the lucite film.

[0007]

[Problem(s) to be Solved by the Invention] By the way, since coating of the recorded member by which lamination was carried out is carried out with the lucite film, it gets damaged, and although it is strong, it has dirt and the case where he wants to use it, folding a recorded member in 2 chip boxes, 3 chip boxes, etc., to a crimp etc. However, to a crimp, since it is strong, manually, it is hard to fold the recorded member by which lamination was carried out, and a fold may become dirty.

[0008] Then, while a copy and a lamination function usual by one set make the purpose of claim 1 of this invention as [use / function / properly / it has a usual copy function and a usual lamination function, and], when folding and using a recorded member, it is offering the electrophotography copying machine which can attach and discharge a fold to a position so that it may be easy to break.

[0009] Next, although the perforation for binding holes may be required since the recorded member by which lamination was carried out is filed and saved, compared with the case of only the usual paper, perforation cannot carry out the recorded member by which lamination was carried out easily, and it requires time and effort for perforation by the handicraft using punch etc. moreover -- many -- a perforation location tends to become difficult [it / to perform perforation of several sheets at once] irregularly.

[0010] Then, the purpose of claim 2 of this invention is offering the electrophotography copying machine which can be perforated and discharged to a recorded member at a position when perforation is required while it is equipped with a usual copy function and a usual lamination function and making it have a copy and a lamination function usual by one set used properly.

[0011] Next, when carrying out the lamination of the lucite film to recorded members, such as a duplication and sheet-like printed matter, generally, the direction of a lucite film serves as somewhat large size from the maximum area of a recorded member. Since the location of a recorded member does not necessarily come in the center to a lucite film, even if location gap of some has produced this, the direction of a lucite film is it large that the whole recorded member surface is covered with a lucite film as like. For this reason, in the recorded member by which lamination was carried out, the margin part which consists of a lucite film usually arises. However, since it may say that a margin part etc. does not have the need for some individuals and becomes larger than the part of a margin, and the size of the original recorded member, there is also fault of being hard coming to deal with it in case it files.

[0012] Then, when a margin part is unnecessary, the purpose of claim 3 of this invention is offering the electrophotography copying machine which can cut and discharge the margin part besides a recorded member, while it is equipped with a usual copy function and a usual lamination function and making it have a copy and a lamination function usual by one set used properly.

[0013] Moreover, it may be necessary to leave some margins, without cutting all the margin parts of the recorded member by which lamination was carried out for some individuals. Then, the purpose of claim 4 of this invention is offering the electrophotography copying machine which can attach and omit the margin of the amount of assignment out of a recorded member, when some margins are required.

[0014] Moreover, it not only cuts the margin part of the recorded member by which lamination was carried out for some individuals, but it may require the thing of the magnitude of the regular size. Then, the purpose of claim 5 of this invention is offering the electrophotography copying machine which can be cut into the appointed size regardless of the size of a recorded member.

[0015]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, the electrophotography copying machine with a lamination function according to claim 1 In the electrophotography copying machine which the toner image formed on image support is imprinted to a transfer paper, the transfer paper after an imprint is conveyed to an anchorage device, and a non-established toner image is fixed on a transfer paper by heat pressurization fixing, and is made to discharge to outside the plane It has the lamination function which feeds paper to the recorded member pinched with the lucite film, conveys to said anchorage device, and laminates a recorded member with a lucite film by heat pressurization fixing. It is selectable to arbitration in a

usual copy function and a usual lamination function, and form the switch for fold attachment in a control unit, and the switch is interlocked with. Said recorded member considers as the configuration possessing the means which creases a recorded member after passing an anchorage device, and when using it, folding a recorded member, a fold can be attached and discharged to a position so that it may be easy to break.

[0016] The electrophotography copying machine with a lamination function according to claim 2 In the electrophotography copying machine which the toner image formed on image support is imprinted to a transfer paper, the transfer paper after an imprint is conveyed to an anchorage device, and a non-established toner image is fixed on a transfer paper by heat pressurization fixing, and is made to discharge to outside the plane It has the lamination function which feeds paper to the recorded member pinched with the lucite film, conveys to said anchorage device, and laminates a recorded member with a lucite film by heat pressurization fixing. It is selectable to arbitration in a usual copy function and a usual lamination function, and form the switch for perforation in a control unit, and the switch is interlocked with. After passing an anchorage device, it considers as the configuration possessing a means to perforate a recorded member, and said recorded member can perforate and discharge to a recorded member at a position, when perforation is required.

[0017] The electrophotography copying machine with a lamination function according to claim 3 In the electrophotography copying machine which the toner image formed on image support is imprinted to a transfer paper, the transfer paper after an imprint is conveyed to an anchorage device, and a non-established toner image is fixed on a transfer paper by heat pressurization fixing, and is made to discharge to outside the plane It has the lamination function which feeds paper to the recorded member pinched with the lucite film, conveys to said anchorage device, and laminates a recorded member with a lucite film by heat pressurization fixing. Selectable [to arbitration] in a usual copy function and a usual lamination function A margin section cut switch is formed in a control unit, and it considers as the configuration possessing a means by which the switch is interlocked with, and said recorded member cuts the margin section after passing an anchorage device, and when a margin part is unnecessary, the margin part besides a recorded member can be cut and discharged.

[0018] The electrophotography copying machine with a lamination function according to claim 4 In addition to the configuration of claim 3, form a margin assignment switch and the switch with which the switch is interlocked with and the margin of the amount of arbitration is attached in a control unit, and the switch is interlocked with. It considers as the configuration possessing a means to attach and cut the margin section of the amount of assignment after passing an anchorage device, and a recorded member can attach and omit the margin of the amount of assignment out of a recorded member, when some margins are required.

[0019] The electrophotography copying machine with a lamination function according to claim 5 In addition to the configuration of claim 3, form a size assignment switch and the switch which assignment size can choose by the switch being interlocked with at arbitration in a control unit, and the switch is interlocked with. After passing an anchorage device, a recorded member can consider as the configuration possessing a means to cut into assignment size, and can cut into the appointed size regardless of the size of a recorded member.

[0020]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained to a detail with reference to a drawing. Drawing 1 is the outline block diagram of the electrophotography copying machine with a lamination function in which the gestalt of 1 operation of this invention is shown. In drawing 1 , a sign 1 is contact glass with which a manuscript is laid, and although a pressure plate, an automatic manuscript feed gear, etc. for pressing down a manuscript are installed on this contact glass 1, it is omitting illustration. Although a sign 2 is exposure optical system and it is the thing of the analog form which consists of the light source, a mirror, a lens for image formation, etc., the thing of the digital method which replaces with this and consists of a laser light source and light-scanning optical system may be used. A sign 6 is a photo conductor drum which is image support, and the electrification unit 4 for performing the imaging process by the electrophotography method, the development unit 3, imprint / separation unit 7, and the cleaning unit 5 are arranged in the perimeter. Moreover, a sign 8 is a feed unit for feeding paper to the recorded member 18 pinched by the transfer paper for a copy, and the lucite film for carrying out lamination, and manual bypass section 8a and sheet paper cassette section 8b are prepared. Moreover, the fixing unit of the heat pressurization fixing method with which, as for the sign 9, a resist roller, the conveyance unit which 10 becomes from a conveyance belt etc., and 11 were equipped with the heating roller pair or the heating roller, and the pressurization roller, the fold attachment section which 12 mentions later or the perforation section, the delivery unit which 13 becomes from a delivery roller, and 14 are paper output trays.

[0021] If the configuration of the imaging section of the electrophotography copying machine of a configuration

of being shown in drawing 1 is the same as that of a very common copying machine and copy actuation is started, first, the photo conductor drum 6 is uniformly charged in the electrification unit 4, light will be irradiated according to the light source of the exposure optical system 2 by the manuscript laid on contact glass 1, the reflected light image from a manuscript will be exposed by the photo conductor drum 6 through a mirror and an image formation lens, and an electrostatic latent image will be formed. And this electrostatic latent image is developed with the toner of the development unit 3, and a toner image is formed on the photo conductor drum 6. On the other hand, timing is doubled with an imaging process, paper is fed to a transfer paper even to the resist roller 9 from manual bypass section 8a of the feed unit 8, or sheet paper cassette section 8b, a transfer paper is fed to the imprint location between the photo conductor drum 6 and imprint / separation unit 7 according to the timing by which the above-mentioned toner image comes to an imprint location with this resist roller 9, and a toner image is imprinted by the transfer paper. And it is conveyed by the fixing unit 11 by the conveyance unit 10, heat pressurization fixing is carried out by the heating roller pair (or a heating roller and a pressurization roller) of the fixing unit 11, and the transfer paper after a toner image imprint is discharged on a paper output tray 14 by the delivery unit 13. On the other hand, the photo conductor drum 6 after a toner image imprint is removed by the cleaning unit 5 in a residual toner etc.

[0022] Now, the electrophotography copying machine shown in drawing 1 is equipped with the lamination function which can laminate the recorded member of the shape of a sheet, such as an identification card, a card, a duplication (transfer paper after toner image fixing), a photograph, a poster, and a map, with a lucite film. That is, paper can be fed to the recorded member 18 into which both sides were inserted by the glue line side of the lucite film which has a glue line on one side from the feed unit 8, it can convey to said fixing unit 11, and the recorded member 18 can be laminated with a lucite film by heat pressurization fixing.

[0023] Although it does not illustrate since it must distinguish from the usual copy actuation in laminating, the switch for a lamination (a thing like a push button) is installed in a control unit, and it enables it to choose a usual copy function and a usual lamination function as arbitration. And it switches to a lamination function by pushing this switch. Feed conveyance of the recorded member 18 pinched under the top with the lucite film 19 beforehand set to manual bypass section 8a in the feed unit 8 or sheet paper cassette section 8b is carried out. It is sent to the fixing unit 11 through the resist roller 9 and the conveyance unit 10, a recorded member laminates with a lucite film by heat pressurization fixing, and a stack is carried out through a delivery unit 13 after this to a paper output tray 14. Moreover, the same actuation is obtained also by continuing pushing the switch for a lamination and pushing a copy start button. Thus, since the switch for a lamination is formed separately, usual copy actuation and lamination actuation can choose it as arbitration, it becomes possible for various workmanship, such as carrying out lamination coating of the duplication after the copy of a manuscript, only lamination coating [only the copy of a manuscript] of a recorded member, and an electrophotography copying machine can be utilized effectively.

[0024] In addition, in the electrophotography copying machine of this example, the imaging process mentioned above operates at the time of the above-mentioned selection of a lamination function. That is, ON of the switch for a lamination is interlocked with and actuation of the exposure optical system 2 of an imaging system, the electrification unit 4, the development unit 3, imprint / separation unit 7, and cleaning unit 5 grade stops. Thus, in the electrophotography copying machine of this invention, since an image excessive on the lucite film which covers a recorded member since the switch for a lamination is interlocked with, only the process of feeding of the recorded member pinched with the lucite film, conveyance, fixing, and discharge is operated and he is trying not to operate an imaging process process is not formed, clear lamination coating is obtained. That is, such faults can be prevented, although dirt, such as a manuscript prevention sheet, may be gathered or the ** toner which was not able to be completely cleaned by photo conductor drum lifting may be imprinted on the lucite film which covers a recorded member, if an imaging process process operates even if there is no manuscript.

[0025] Next, in addition to the above-mentioned lamination function, in the electrophotography copying machine of this example, the fold attachment section or the perforation section 12 is installed between the fixing unit 11 and the delivery unit 13. Here, the example of fold attachment equipment is shown in drawing 2 , and the example of perforation equipment is shown in drawing 3 .

[0026] First, the example at the time of forming the fold attachment equipment shown in the part of the sign 12 of the electrophotography copying machine shown in drawing 1 at drawing 2 is explained. As shown in drawing 2 , fold attachment equipment consists of concave 17a prepared in the cutting edge 15 for fold attachment, the up-and-down conveyance guide plates 16 and 17, and the bottom conveyance guide plate 17. Although the recorded member 18 laminated with the lucite film 19 by the above-mentioned fixing unit 11 passes through between the

upper conveyance guide plate 16 and the bottom conveyance guide plate 17. Passage of the tip is beforehand detected by fixing / delivery detection section 11a prepared in the outlet side of the fixing unit 11 of drawing 1. When it becomes predetermined timing, it is inserted by the cutting edge 15 for fold attachment which has descended by the motor or the solenoid (not shown), and concave 17a on the bottom conveyance guide plate 17, and a crease can be made. The recorded member 18 after fold attachment is discharged by the paper output tray 14 through a delivery unit 13. Moreover, after the cutting edge 15 for fold attachment makes a crease, it is made to return to the original location immediately. Lay length perpendicular to the space of the cutting edge 15 for fold attachment is made into larger die length than the **** possible maximum form width here. A metal or resin is sufficient as the quality of the material of a cutting edge.

[0027] Since the switch for fold attachment (not shown) is formed in the control unit of an electrophotography copying machine, the above-mentioned fold attachment equipment is interlocked with the switch for fold attachment of a control unit and it operates to predetermined timing, a crease can be made by the position of the recorded member 18 laminated with the lucite film 19. Thus, in the electrophotography copying machine of this example, since it has fold attachment equipment in addition to the lamination function, when using it, folding the laminated recorded member 18, a fold can be attached and discharged so that it may be easy to break. Moreover, since the fold is attached, the laminated recorded member 18 can be folded finely.

[0028] Next, the example at the time of forming the perforation equipment shown in the part of the sign 12 of the electrophotography copying machine shown in drawing 1 at drawing 3 is explained. As shown in drawing 3, perforation equipment consists of round hole 17b prepared in the up-and-down conveyance guide plates 16 and 17 and the bottom conveyance guide plate 17, and punch ***** 20. Although the recorded member 18 laminated with the lucite film 19 by the above-mentioned fixing unit 11 passes through between the upper conveyance guide plate 16 and the bottom conveyance guide plate 17, passage of the tip is detected by fixing / delivery detection section 11a prepared in the outlet side of the fixing unit 11 of drawing 1. When it becomes predetermined timing, it is inserted by punch ***** 20 which has descended by the motor or the solenoid (not shown), and round hole 17b on the bottom conveyance guide plate 17, and a punch hole is made. The recorded member 18 after perforation is discharged by the paper output tray 14 through a delivery unit 13.

[0029] Since the switch for perforation (not shown) is formed in the control unit of an electrophotography copying machine, the above-mentioned perforation equipment is interlocked with the switch for perforation of a control unit and it operates to predetermined timing, the position of the laminated recorded member 18 can be perforated. Thus, in the electrophotography copying machine of this example, since it has perforation equipment in addition to the lamination function and can perforate and discharge when using it, making a hole in the recorded member 18 laminated with the lucite film 19, it does not take the time and effort of perforation. Moreover, when filing and using the recorded member 18 which a large number laminated for a file etc., a binding hole site can be arranged and it can file finely.

[0030] Next, the gestalt of operation of claim 3-5 is explained. Drawing 4 is the outline block diagram of an electrophotography copying machine with a lamination function, and it is the same configuration section which attached drawing 1 and a same sign. It is the configuration of the electrophotography copying machine shown in drawing 4, and the configuration and imaging process of an imaging system are as the example of drawing 1 having explained. Moreover, paper is fed to the recorded member 18 pinched with the lucite film 19 from manual bypass section 8a of the feed unit 8, or sheet paper cassette section 8b. Although it is as having had the lamination function which conveys to the fixing unit 11 and laminates the recorded member 18 with the lucite film 19 by heat pressurization fixing, and the selectable point having also mentioned above a usual copy function and a usual lamination function in arbitration. In the electrophotography copying machine of this example, a margin section cut switch is formed in a control unit (not shown), and the cut equipment 21 with which the switch is interlocked with, and the recorded member 18 cuts the margin section after passing the fixing unit 11 is provided.

[0031] That is, in the electrophotography copying machine of this example, paper is fed to the recorded member 18 pinched with the lucite film 19 from manual bypass section 8a of the feed unit 8, or sheet paper cassette section 8b, and after conveying to the fixing unit 11 and laminating the recorded member 18 with the lucite film 19 like drawing 6 (a) by heat pressurization fixing, the margin section can be cut like drawing 6 (b) with cut equipment 21. In addition, die-length L between the core of the heating roller in the fixing unit 11 and the core of the delivery roller of a delivery unit 13 needs to be longer than the maximum main street paper die length at least.

[0032] As shown in drawing 6 (a), there is a margin part in the surroundings of the recorded member 18

laminated with the lucite film 19. It may be said that this margin part is a part of only the lucite film 19 with which the recorded member 18 does not exist, and a margin part etc. does not have the need for some individuals. So, at this example, the above-mentioned cut equipment 21 is installed after the fixing unit 11, and a margin section cut switch is formed in the control unit of a copying machine (not shown), and if the margin section cut switch is pushed and a signal is turned on, it will operate to the timing which interlocks and has cut equipment 21.

[0033] Drawing 5 is the important section sectional view showing an example of cut equipment here. drawing 5 - setting -- a sign 26 -- for a cutter guide-cum-a paper bail, and 29, as for the piece recovery box of a cut, and 31, a stopper and 30 are [a paper detection sensor and 27 / a cutter and 28 / the bottom guide plate of a delivery inlet port and 32] conveyance rollers. With this cut equipment, a stopper 29 is formed before a delivery unit 13, it rotates in the location shown as a continuous line from the location which the stopper 29 showed with the broken line by the timing which is until the recorded member 18 laminated with the lucite film 19 conveyed from the fixing unit 11 comes, and recorded member 18 tip is stopped. Forming the paper detection sensor 26 which detects the tip of the recorded member 18 to coincidence in front of a stopper 29, it is uniting with a cutter 27 and the cutter guide 28, and the paper detection sensor 26 has become movable at right and left (a recorded member travelling direction), and stops in the location at recorded member 18 tip. Subsequently, a cutter guide-cum-the paper bail 28 descends, the recorded member 18 is pressed down, a cutter 27 descends further, and the margin part at a tip is cut. After being cut, the bottom guide plate 31 of a delivery inlet port carries out rotation descent, and the piece of a cut falls downward and is contained to the piece recovery box 30 of a cut. Such actuation is performed also by the back end of the recorded member 18. However, in the margin partial cut of the back end, after the stopper 29 has fallen on the location shown with a broken line, it is carried out, and the back end of the recorded member 18 is sent to a cutter location.

[0034] Moreover, apart from cut actuation of the point and the back end of the above-mentioned recorded member, it is similarly cut about the margin part of the right-and-left both ends (direction perpendicular to space by a diagram) of the recorded member 18. About the configuration and actuation, it is fundamentally [as the cut of the margin parts of the point and the back end] the same. That is, the right-and-left both ends of the recorded member 18 are detected by the sensor, a cutter is moved by the margin, and the recorded member 18 is pressed down and cut. At this time, it is processing of the piece of a cut as a different point. That is, since a guide plate cannot carry out rotation descent, it is desirable to spray Ayr, or to, operate the arm which moves perpendicularly with the travelling direction of a recorded member on a guide plate for example, and to drop the piece of a cut in a recovery box.

[0035] Next, in the electrophotography copying machine shown in drawing 4, a margin assignment switch is formed in a control unit (not shown), the switch is interlocked with further, the amount configuration switch of margins to which the margin of the amount of arbitration is attached is prepared (not shown), the switch is interlocked with and cut equipment 21 operates to predetermined timing. That is, after turning ON a margin assignment switch, by setting the amount of margins by the amount configuration switch of margins, the point and the back end, and the right-and-left both ends of the recorded member 18 are detected by the paper detection sensor 26 of cut equipment 21, a cutter is moved to the location which left the amount of setting margins, and the recorded member 18 is pressed down and cut. Thereby, as shown in drawing 7, the margin (the right-and-left both ends a, the point back end b) of arbitration can be attached, and it can cut into the surroundings of the recorded member 18 laminated with the lucite film 19 with cut equipment 21.

[0036] Next, in the electrophotography copying machine shown in drawing 4, it operates to the timing which a size assignment switch is formed in a control unit (not shown), and the size selecting switch from which the switch is interlocked with and assignment size can be chosen is formed (not shown), is interlocked with the switch, and has cut equipment. For example, irrespective of the original magnitude of the recorded member 18 laminated with the lucite film 19, if a size assignment switch is turned ON first and then A5 is chosen with a size selecting switch when cutting into A5 size the recorded member which the magnitude of A4+alpha laminated, cut equipment 21 will cut the point back end and the right-and-left both ends of the recorded member 18 so that it may become the A5 version size. Thereby, as shown in drawing 8, it can cut into the A5 version size without a margin.

[0037]

[Effect of the Invention] As explained above, it sets to the electrophotography copying machine with a lamination function of claim 1. Can have a usual copy function and a usual lamination function, can use a copy and lamination coating usual by one set properly, and further, in using it, folding a recorded member Since the switch

for fold attachment of a control unit is interlocked with and fold attachment equipment operates to predetermined timing, a fold can be attached and discharged by the position of the laminated recorded member. Therefore, it can laminate and the recorded member creased further can be easily obtained in a series of flow of an electrophotography copying machine.

[0038] In the electrophotography copying machine with a lamination function of claim 2, since can have a usual copy function and a usual lamination function, and a copy and lamination coating usual by one set can be used properly, the switch for perforation of a control unit is further interlocked with at a recorded member when perforation is required, and perforation equipment operates to predetermined timing, it can perforate and discharge by the position of the laminated recorded member. Therefore, it can laminate and the recorded member which is filed further and by which the hole etc. was perforated can be easily obtained in a series of flow of an electrophotography copying machine.

[0039] In the electrophotography copying machine with a lamination function of claim 3, since can have a usual copy function and a usual lamination function, and a copy and lamination coating usual by one set can be used properly, the margin section cut switch of a control unit is interlocked with when the margin section still needs to be cut, and cut equipment operates to predetermined timing, the margin section of the laminated recorded member can be cut and discharged. Therefore, it can laminate and the recorded member into which the margin section was cut further can be easily obtained in a series of flow of an electrophotography copying machine.

[0040] In the electrophotography copying machine with a lamination function of claim 4, since in addition to the configuration of claim 3 a margin assignment switch and the amount configuration switch of margins are interlocked with and cut equipment operates to predetermined timing, the margin of the amount of assignment can be attached and discharged to the laminated recorded member. Therefore, it can laminate and the recorded member which attached the margin of the amount of assignment further can be easily obtained in a series of flow of an electrophotography copying machine.

[0041] In the electrophotography copying machine with a lamination function of claim 5, since in addition to the configuration of claim 3 a size assignment switch and a size selecting switch are interlocked with and cut equipment operates to predetermined timing, the laminated recorded member can be cut into the magnitude of the appointed size, and can be discharged. Therefore, it can laminate and the recorded member further cut into the magnitude of the appointed size can be easily obtained in a series of flow of an electrophotography copying machine.

[Translation done.]

*** NOTICES ***

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the outline block diagram of the electrophotography copying machine in which one example of this invention is shown.

[Drawing 2] It is drawing showing one example of this invention, and is the important section sectional view showing the example of a configuration of the fold attachment equipment installed in the electrophotography copying machine shown in drawing 1 .

[Drawing 3] It is drawing showing another example of this invention, and the important section sectional view showing the example of a configuration of the perforation equipment installed in the electrophotography copying machine which shows (a) to drawing 1 , and (b) are the important section perspective views showing the example of a configuration of the point of punch ****.*.

[Drawing 4] It is the outline block diagram of the electrophotography copying machine in which another example of this invention is shown.

[Drawing 5] It is the important section sectional view showing the example of a configuration of the cut equipment installed in the electrophotography copying machine shown in drawing 4 .

[Drawing 6] It is the explanatory view of the example of a margin section cut of the laminated recorded member, and drawing in which (a) shows the condition before a cut, and (b) are the condition **** Figs. after a cut.

[Drawing 7] It is the explanatory view of the example in the case of attaching and cutting the margin of the amount of assignment into the laminated recorded member, and drawing in which (a) shows the condition before a cut, and (b) are the condition **** Figs. after a cut.

[Drawing 8] It is the explanatory view of the example in the case of cutting the laminated recorded member into the magnitude of the appointed size, and drawing in which (a) shows the condition before a cut, and (b) are the condition **** Figs. after a cut.

[Description of Notations]

- 1 Contact Glass
- 2 Exposure Optical System
- 3 Development Unit
- 4 Electrification Unit
- 5 Cleaning Unit
- 6 Photo Conductor Drum
- 7 Imprint / Separation Unit
- 8 Feed Unit
- 8a Manual bypass section
- 8b Cassette section
- 9 Resist Roller
- 10 Conveyance Unit
- 11 Fixing Unit
- 11a Delivery detection section
- 12 Fold Attachment Section or Perforation Section
- 13 Delivery Unit
- 14 Paper Output Tray
- 15 Fold Attachment Cutting Edge
- 16 Upper Conveyance Guide Plate

17 Bottom Conveyance Guide Plate
17a Concave
17b Round hole
18 Recorded Member
19 Lucite Film
20 Punch *****
21 Cut Equipment
26 Paper Detection Sensor
27 Cutter
28 Cutter Guide (*****)
29 Stopper
30 Piece Recovery Box of Cut
31 Bottom Guide Plate of Delivery Inlet Port
32 Conveyance Roller

[Translation done.]

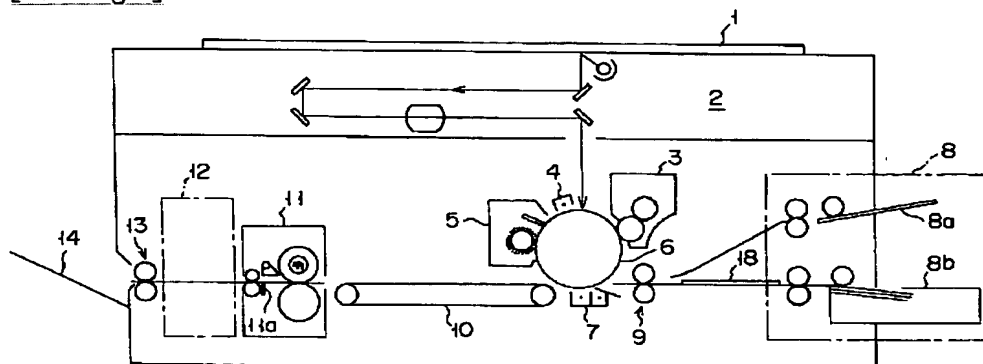
* NOTICES *

JP0 and NCIP1 are not responsible for any damages caused by the use of this translation.

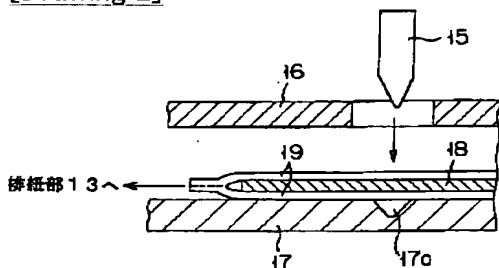
- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DRAWINGS

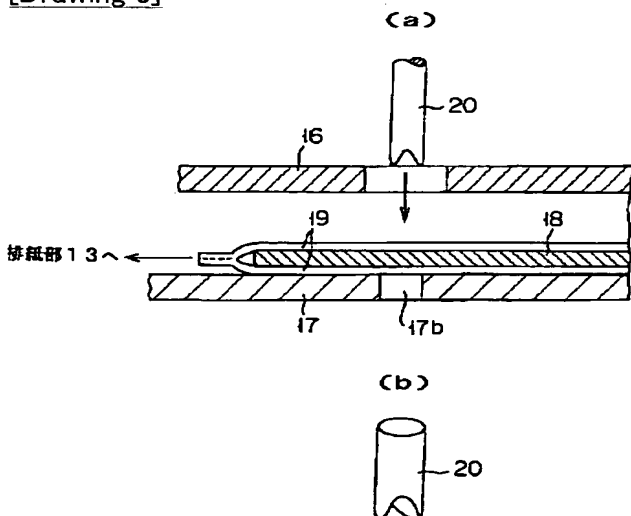
[Drawing 1]



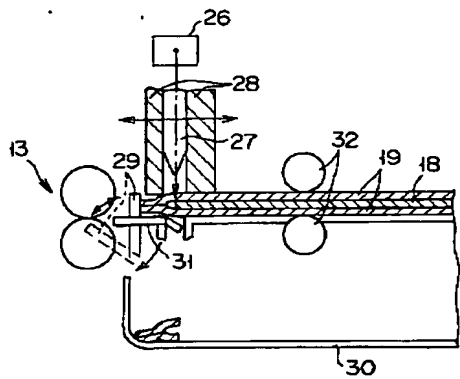
[Drawing 2]



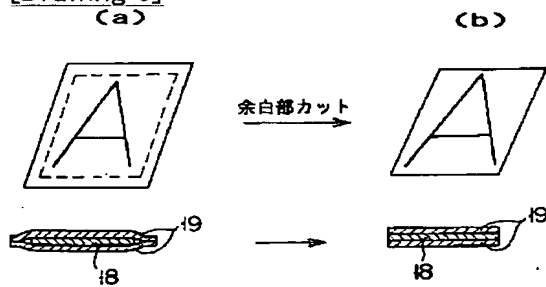
[Drawing 3]



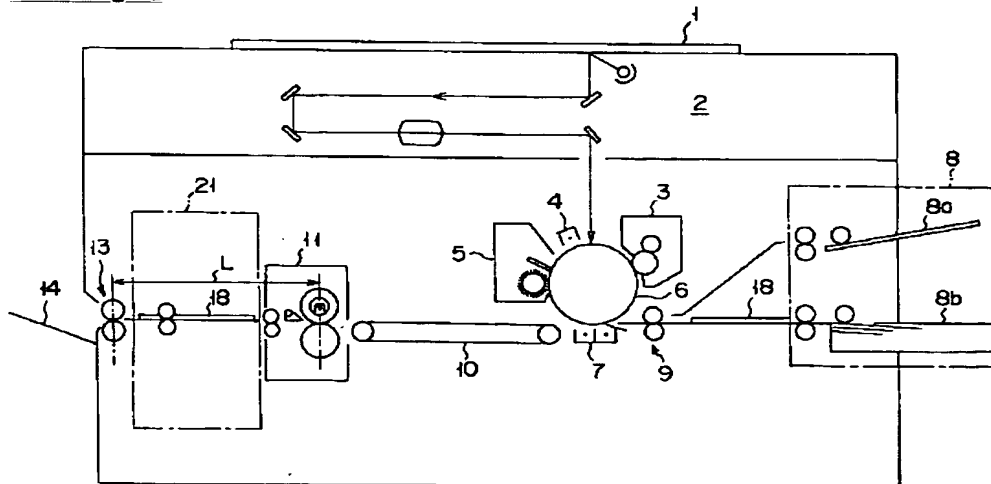
[Drawing 5]



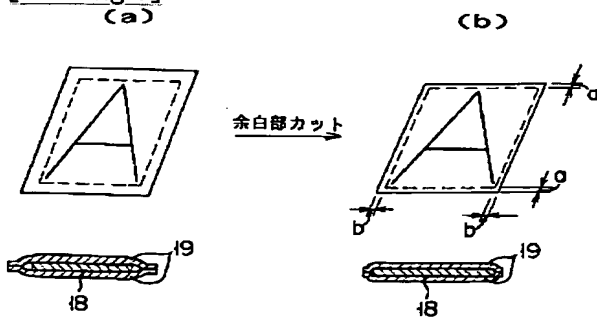
[Drawing 6]



[Drawing 4]



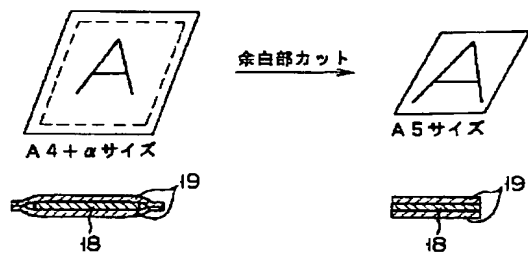
[Drawing 7]



[Drawing 8]

(a)

(b)



[Translation done.]